

REMARKS

This paper is responsive to the Office Action dated December 15, 2008. All rejections and objections of the Examiner are respectfully traversed. Reconsideration is respectfully requested.

The amendments herein are clarifications intended to more precisely set forth the present invention. Support for the amendments herein is found throughout the Specification as originally filed. For example, support in the Specification as originally filed for the present claim amendments includes page 7, line 21 through line 2 on page 8, lines 22-25 on page 9, and lines 11-15 on page 10.

New claims have been added to provide a system claim and re-introduce a computer program product claim.

No new matter has been added.

Claims 1-22 stand rejected under 35 U.S.C. 103 for obviousness based on the combination of United States patent application publication number 2001/0029526 ("Yokoyama") and United States patent application publication number 2003/0188040 ("Vincent"). Applicant respectfully traverses this rejection.

Yokoyama discloses traveling lists that are managed separately from agent programs. Traveling time is predicted by Yokoyama based on home terminal information at traveling destinations and information about programs to be executed at traveling destinations. The traveling destinations in Yokoyama are divided into multiple groups as needed and agent distribution is performed through these groups, to allow the time involved in traveling to be controlled.

A mobile agent execution state management program in Yokoyama monitors the traveling status of a mobile agent by referring to execution management data, which contains the execution state of a mobile agent. In cases such as when the mobile agent has not returned to a server from a number of home terminals significantly after a traveling limit time has passed, the Yokoyama server administrator is notified. A service schedule manager in Yokoyama refers to a service schedule, which contains the distribution schedule for services, and issues request events so that, for example, agents containing a particular service program are distributed at service distribution times.

Service program data is formed by Yokoyama from a set of service program-specific information, where there is one service program-specific information for each type of provided service. The service program-specific information of Yokoyama is formed from a service name, attributes (e.g., service provider name), an average execution time, an average memory usage, a service price, a distribution plan, a traveling limit time, and a program body data. The distribution plan of Yokoyama is used to determine if distribution times are to be strictly followed or if a certain amount of leeway should be given while keeping costs (e.g., communication fees) down.

The mobile agent execution state management data of Yokoyama is used to manage the execution state of a mobile agent that has been sent out from the server system. The Yokoyama agent execution state management data is formed from a mobile agent ID, a mobile agent state (e.g., traveling, traveling completed, fault processing), a list of service program names contained in the mobile agent, and traveling data. The traveling data in Yokoyama is formed from a traveling list, a send time, a scheduled end time, and an end time for the mobile agent, as well as

fault data. The Yokoyama mobile agent distributor performs operations to manage the traveling state and fault state of a mobile agent based on mobile agent execution state management data.

When a fault message is sent from a home terminal in the Yokoyama system, a message processor uses the mobile agent execution state management data and the mobile agent identifier in the fault message to determine the mobile agent and the traveling list for which the fault is occurring. Using the traveling list, a fault avoidance traveling list, in which the faulty home terminal is removed from the list, is generated by Yokoyama and sent to the home terminal that sent the fault message.

Vincent discloses a structured software agent hosting environment that supports installing software agents, runtime environments and agent software extensions along with bindings of those objects that are to occur at runtime. Vincent provides a method for hosting software agents, in which there is accepted an agent package associated with an agent. The agent package of Vincent includes an agent module, a runtime specification and zero or more extension specifications. The runtime specification of Vincent specifies a runtime module required by the agent module. The agent module of Vincent is prepared for execution, and there is stored a runtime reference that includes an association of the runtime specification and the agent module. Vincent allows a single software agent manager to provide uniform security processing, agent maintenance functionality and operational control of agents that are developed with a variety of software tools and that operate under disparate runtime environments.

Nowhere in the combination of Yokoyama and Vincent is there disclosed or suggested any method for identifying an off-schedule software agent operating in a computer system, said method comprising:

associating an entry time with said software agent entering a queue, *wherein said queue is a run queue in which said software agent is stored in said computer system until an executive process in said computer system is free to process said software agent by running said software agent until said software agent is finished executing, wherein said entry time is a time at which a manager process moves said software agent from a holding queue to said run queue;*

obtaining a clock signal associated with *a clock time at which said software agent is still stored in said run queue;*

comparing said entry time to said clock time to obtain a queue time for said software agent;

comparing said queue time to a threshold limit; and

identifying said software agent as said off-schedule software agent if said queue time exceeds said threshold time limit. (emphasis added)

as in the present independent claim 1. The combination of Yokoyama and Vincent results in a system that operates to calculate a predicted time for a traveling operation performed by a mobile agent that returns to a server system after having traversed one or more remote home terminals (See Fig. 16 of Yokoyama and paragraphs 132 and 133) and that also includes an agent manager that receives agent specifications from agent publishers, and responds to requests for specified agents by outputting agent instances to the requesters (See Fig. 2 of Vincent). Neither Yokoyama nor Vincent provide for measuring a time that an agent has been stored in a run queue measured since an entry time at which an agent manager moves the agent from a holding queue to the run queue. Accordingly, the combination of Yokoyama and Vincent does not disclose or suggest associating an entry time with said software agent entering a queue, wherein said queue is a run queue in which said software agent is stored in said computer system until an executive process in said computer system is free to process said software agent by running said software agent until said software agent is finished executing, *wherein said entry time is a time at which a manager process moves said software agent from a holding queue to said run queue*, obtaining a clock signal associated with *a clock time at which said software agent is still stored in said run*

*queue*, comparing said entry time to said clock time to obtain a queue time for said software agent *comparing said queue time to a threshold limit, identifying said software agent as said off-schedule software agent if said queue time exceeds said threshold time limit*, as in the present independent claim 1.

For the above reasons, Applicant respectfully urges that the combination of Yokoyama and Vincent does not disclose or suggest all of the features of the present independent claims. Accordingly, the combination of Yokoyama and Vincent does not support a *prima facie* case of obviousness with regard to the present independent claims. As to the remaining claims, they each depend from the independent claims, and are respectfully believed to be patentable over the combination of Yokoyama and Vincent for at least the same reasons.

Reconsideration of all pending claims is respectfully requested.

In this Amendment, Applicant has amended the independent claims to more precisely claim the invention. Applicant is not conceding that the subject matter encompassed by the unamended claims is not patentable. Applicant respectfully reserves the right to pursue additional claims, including the subject matter encompassed by the unamended independent claims, in one or more continuing applications.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues requiring adverse action, it is respectfully requested that the Examiner telephone the undersigned Applicant's Attorney at 617-630-1131 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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Date

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